



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,024	07/11/2001	Noboru Kamijo	JP920000131US1	2679

877 7590 04/24/2003

IBM CORPORATION, T.J. WATSON RESEARCH CENTER  
P.O. BOX 218  
YORKTOWN HEIGHTS, NY 10598

EXAMINER

LESPERANCE, JEAN E

ART UNIT PAPER NUMBER

2674

DATE MAILED: 04/24/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

*[Handwritten signature]*

# Office Action Summary

Application No.

09/682,024

Applicant(s)

KAMIJO ET AL.

Examiner

Jean E Lesperance

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

Claims 1-16 are presented for examination.

### ***Drawings***

This application, filed under former 37 CFR 1.60, lacks formal drawings. The informal drawings filed in this application are acceptable for examination purposes. When the application is allowed, applicant will be required to submit new formal drawings. In unusual circumstances, the formal drawings from the abandoned parent application may be transferred by the grant of a petition under 37 CFR 1.182.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103 (a) as being unpatentable over U.S. Patent # 6,137,479 ("Olsen et al.") in view of U.S. Patent # 6,369,794 ("Sakurai et al.").

As for claim 1, Olsen et al. teach the computer processor Fig.1 (48) corresponding to a display controller for controlling a display position of the pointer on the display screen; a computer processor Fig.1 (48) processes the motion sensor

signals to control the position of the cursor on the display screen 26 corresponding to a displacement detector for detecting a displacement; and a track ball 70 (FIG. 4B) is mounted on the top of the watch and the track ball 70 is rotated to move the cursor on the display screen 26 corresponding to a pointer moving device for moving the pointer on the display screen based on the detected displacement. Accordingly, Olsen et al. teach all the claimed limitations with the exception of providing the motion of the device itself.

However, Sakurai et al. teach the user wearing a wristwatch-type PDA (Personal Digital Assistance) swings his/her wrist from side to side, latest information is displayed on a display screen of the PDA (column 23, lines 59-62) corresponding to displacement or motion of the device itself. There is a motion detector to sense when a movement occurs.

It would have been obvious to utilize the motion sensor as taught by Sakurai et al. in the programmable computer pointing device disclosed by Olsen et al. because this would allow the user to interact with the GUI without using other means.

As for claim 2, Sakurai et al teach motion detecting means for detecting a motion of the operation indication outputting device caused by the user's action where the output is the display screen outputting images (column 28, lines 11-13) corresponding to the displacement detector comprising an image sensor, wherein an image sensed by the image sensor is processed to obtain a displacement.

As for claim 3, Sakurai et al teach an motion detecting unit Fig.1 (101) where it is including some hardware made of complementary metal-oxide semiconductor

corresponding to the image sensor comprising a complementary metal-oxide semiconductor or a charge coupled device.

As for claim 4, Olsen et al. teach a data port Fig.1 (52) sends and receives data using infrared or radio frequency signals the image sensor comprising an infrared sensor.

As for claim 5, Sakurai et al. teach an operation determining unit includes a storing unit which stores operation indications that each correspond to a type of the user's action (abstract) an operator for activating the image sensor.

As for claim 6, Olsen et al. teach a computer mouse (wristwatch) housing contains the components that perform the traditional computer mouse functions, namely, moving the cursor and selecting items on the display screen the operator further includes the function for directing a selection of an object pointed to by the pointer or for the execution of predetermined processing defined for the object, whereby the operator has a plurality of functions.

As for claim 7, Olsen et al. teach a mouse watch device Fig5 (54) corresponding to the device is of a wristwatch type.

Claims 8-10 are rejected under 35 U.S.C. 103 (a) as being unpatentable over U.S. Patent # 6,137,479 ("Olsen et al.") in view of U.S. Patent # 6,111,580 ("Kazama et al.").

As for claim 8, Olsen et al. teach a display for displaying a screen Fig.5 (60); a seat Fig.5 (82) corresponding to a case for supporting the display; a wristband Fig.5 (76) corresponding to an attached belt attached to the case. Accordingly, Olsen et al.

teach all the claimed limitations as recited in claim 8 with the exception of providing a touch sensor.

However, Kazama et al. teach the touch sensor Fig.15 (53) is attached to the watch or set at predetermined position near the watch (For example, pocket of the user's wear in which the watch is included) corresponding to a touch sensor mounted in the case.

It would have been obvious to utilize the touch sensor as taught by Kazama et al. in the programming computer pointing device disclosed by Olsen et al. because this would allow the user to input an indication signal by a simple action.

As for claim 9, Kazama et al. teach the touch sensor Fig.15 (53) is attached to the watch or set at predetermined position near the watch (For example, pocket of the user's wear in which the watch is included) and the touch sensor may be provided on both sides of the display.

As for claim 10, Olsen et al. teach a computer processor Fig.1 (48) processes the motion sensor signals to control the position of the cursor on the display screen 26 corresponding to displacement detection section for detecting a displacement of the display; and the motion encoder 24 detects rotation of the roller ball 42 and generates signals that indicate the direction and distance the roller ball 42 moves corresponding to pointer position changing device for changing a display position of a pointer based on the detected results, thereby moving the pointer displayed on the screen.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 11-16 are rejected under 35 U.S.C. 102 (e) as being unpatentable over U.S. Patent 6,369,794 ("Sakurai et al.").

As for claim 11, Sakurai et al. teach display such as text on a liquid crystal display panel is scrolled sideways or up and down by a number of pixels corresponding to the calculated travel, or a cursor displayed on the display panel is moved sideways or up and down by the number of pixels (column 1, lines 43-48) corresponding to a first step of taking an image of a physical object facing the device continuously and detecting a relative displacement between the taken object and the display and a second step for changing a display position of the pointer displayed on the display based on the detected displacement.

As for claim 12, Sakurai et al. teach the user action analyzing unit 103 acquires time series data (acceleration curve) 1601 of acceleration levels shown in FIG. 16 from the motion detecting unit 101 and calculates a mean value of a sequence of differential values  $dv/dt$  that each represent the amount of change in acceleration level per unit of time (column 14, lines 32-37) corresponding to calculating a motion vector at a certain place in an image based on the movement of the image that was taken multiple times; and a display such as text on a liquid crystal display panel is scrolled sideways or up and down by a number of pixels corresponding to the calculated travel, or a cursor displayed on the display panel is moved sideways or up and down by the number of pixels (column 1, lines 43-48) corresponding to obtaining a relative displacement between the object and the display based on the calculated motion vector.

As for claim 13, Sakurai et al. a display such as text on a liquid crystal display panel is scrolled sideways or up and down by a number of pixels corresponding to the calculated travel, or a cursor displayed on the display panel is moved sideways or up and down by the number of pixels (column 1, lines 43-48) corresponding to moving the device relative to the object, the relative displacement between the object and the display is obtained by inverting a sign of the motion vector. By moving the device sideways is like inverting the sign of the motion vector.

As for claim 14, Sakurai et al. teach the operation determining unit 104 compares differential mean value  $D$  outputted from the user action analyzing unit 103 with a predetermined value to judge whether the user's action belongs to low frequency of slowly swinging the enclosure 303 or high frequency of tapping the enclosure 303



(column 14, lines 63-67) corresponding to generating a time-series moving pattern of a certain place based on a position of the certain place in a principal image and a position of a place corresponding to the certain place in a plurality of other images that were taken apart in time from the principal image and comparing the generated time-series moving pattern with a plurality of model patterns registered in advance to select a most approximate model pattern; a display such as text on a liquid crystal display panel is scrolled sideways or up and down by a number of pixels corresponding to the calculated travel, or a cursor displayed on the display panel is moved sideways or up and down by the number of pixels (column 1, lines 43-48) corresponding to the second step comprising the steps of changing a display position of the pointer based on a moving pattern that was defined for the selected model pattern.

As for claims 15 and 16, Sakurai et al. teach a display such as text on a liquid crystal display panel is scrolled sideways or up and down by a number of pixels corresponding to the calculated travel, or a cursor displayed on the display panel is moved sideways or up and down by the number of pixels (column 1, lines 43-48) corresponding to detecting displacement, changing display position and the steps of starting to detect a displacement of the device when a predetermined startup operation is performed by a user.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean Lesperance whose telephone number is (703)

Art Unit: 2674

308-6413. The examiner can normally be reached on from Monday to Friday between 8:00AM and 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709 .

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

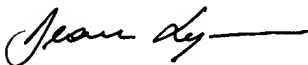
**or faxed to:**

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Jean Lesperance



Date 4-18-2003

Art Unit 2674



RICHARD HJERPE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600